



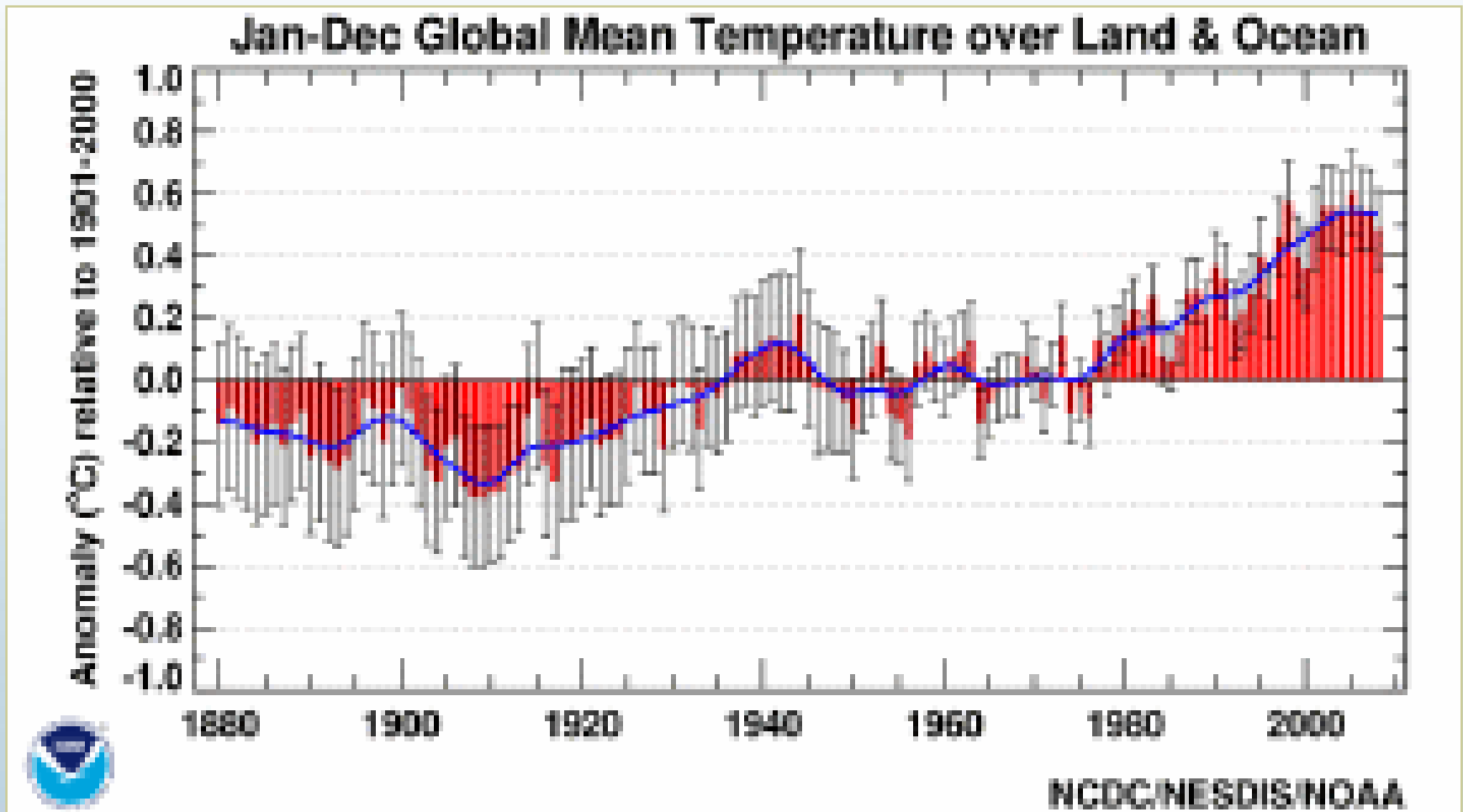
General Administration
STATE OF WASHINGTON

**Energy Efficiency in the Public Sector
New State Statute and Federal/State
Stimulus (Sticks and Carrots)
October 29 2009**

Outline

- ▶ Climate Issues Still Big at the State and National Level
- ▶ Building Related Energy Efficiency and Climate Legislation
- ▶ State and Federal Stimulus
- ▶ GA's Energy Savings Performance Contracting Making it Happen

Climate Change



Governor Gregoire's Testimony on Climate Change - March 17, 2009

- ▶ Scientists predict storms and floods, droughts and fires, of greater frequency and magnitude than we've seen in history.
- ▶ Decreases in snowpack pose for us a significant threat to irrigated agriculture and salmon, which are two of the cornerstones of Washington's economy and culture.
- ▶ Last week, scientists met in Copenhagen, 80 of them. They said that the worst-case predictions for early climate change are actually coming true.

The Southern Resident killer whale population experienced a 20 percent decline in the 1990s



E2SSB 5560: State Agencies – Emissions Reduction

- ▶ Emission Level Reductions
 - ▶ By 2020 reduce by 15% below 2005 levels
 - ▶ By 2035 reduce by 36% below 2005 levels
 - ▶ By 2050 reduce by 57.5% below 2005 levels

E2SSB 5560: State Agencies – Emissions Reduction

- ▶ By June 30, 2010 State agencies report:
 - ▶ 2005 emission levels of their operations (historical)
 - ▶ 2009 emission levels (current)
 - ▶ Projected emission levels through 2035

E2SSB 5560: State Agencies – Emissions Reduction

- ▶ By June 30, 2011 State agencies report:
 - ▶ Strategies to meet goals
 - ▶ Must address:
 - ▶ Travel, telecommuting, other emitters (buildings)

E2SSB 5560: State Agencies – Emissions Reduction

- ▶ By Oct. 1, 2012 and every even year thereafter State agencies report:
 - ▶ Actions taken to meet targets
- ▶ Governor shall designate a point person at each agency

E2SSB 5560: State Agencies – Emissions Reduction

- ▶ Dept. of Ecology to develop emissions calculators to assist state agencies
- ▶ Dec. 31, 2010 and each even year thereafter Ecology will report emission levels to the Governor and legislature

E2SSB 5560: State Agencies – Emissions Reduction

- ▶ Average fuel efficiency of cars purchased after June 15, 2010 must be at least 40 MPG
- ▶ Average fuel efficiency of light duty trucks and vans purchased after June 15, 2010 must be at least 27 MPG

E2SSB 5560: State Agencies – Emissions Reduction

- ▶ State-owned buildings and schools must adopt recognized standards and document costs and savings each year

E2SSB 5560: State Agencies – Emissions Reduction

- ▶ Dept. of Ecology, Agriculture, Commerce, Fish & Wildlife, Natural Resources, and Transportation to convene experts to help with development of climate change response strategy.

E2SSB 5854: Climate Pollution Reduction – Energy Efficiency

- ▶ Dept. of Commerce to prepare a strategic plan to meet greenhouse gas reduction goals by Dec. 31, 2010 and every 3 years thereafter
- ▶ Must include:
 - ▶ State energy code, education, renewable energy development, etc.

E2SSB 5854: Climate Pollution Reduction – Energy Efficiency

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- ▶ Must include:
 - ▶ State energy code, education, renewable energy development, etc.

E2SSB 5854: Climate Pollution Reduction – Energy Efficiency

- ▶ The 2031 state energy code must achieve 70% reduction in energy compared to the 2006 energy code
- ▶ By Jan 1, 2010 qualifying utilities must provide Energy Star compatible energy use data to non-residential buildings over 10,000 sf

E2SSB 5854: Climate Pollution Reduction – Energy Efficiency

- ▶ By January 1, 2012 buildings over 10,000 sf must provide Energy Star benchmark data to a prospective lessee, buyer or lender
- ▶ By July 1, 2010 state agencies and higher ed must create a energy benchmark for buildings over 10,000 sf

E2SSB 5854: Climate Pollution Reduction – Energy Efficiency

- ▶ By January 1, 2010 GA to establish a state portfolio manager master account (done)
- ▶ By July 1, 2010 GA shall develop a TA program to provide preliminary audit and investment grade audit (done)

E2SSB 5854: Climate Pollution Reduction – Energy Efficiency

- ▶ For state agencies and higher ed with buildings below Energy Star score of 50 a preliminary audit is required by July 1, 2011
- ▶ If cost effective measures are identified, an investment grade audit must be completed by July 1, 2013

E2SSB 5854: Climate Pollution Reduction – Energy Efficiency

- ▶ Implementation of cost effective measures must be completed by July 1, 2016

E2SSB 5854: Climate Pollution Reduction – Energy Efficiency

- ▶ State and higher ed can not enter into a lease if the building has an Energy Star score less than 75 by Jan. 1, 2010
- ▶ If so, a preliminary audit followed by an investment grade audit if cost effective measures are identified, would be required
- ▶ Implementation of cost effective measures is required within two years of the lease agreement

E2SSB 5854: Climate Pollution Reduction – Energy Efficiency

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- ▶ Implementation of cost effective measures is required within two years of the lease agreement

State and Federal Stimulus

- ▶ **State K-12:** OSPI 16.9 Million for Energy Efficiency
- ▶ Pre-application deadline was Sept. 11, 2009
- ▶ Final application due Dec. 4, 2009
- ▶ Max. amount \$500K
- ▶ 109 school districts are participating
- ▶ Must use Energy Savings Performance Contracting

State and Federal Stimulus

- ▶ **Federal** ARRA funding – Grants for Renewable Energy projects
- ▶ Block Grants for Energy Efficiency went to local governments (cities over 35K and counties over 200K population)
- ▶ Competitive Block Grants for smaller local governments (\$6.4 Million)
- ▶ Low Interest Loans for Energy Efficiency for state agencies and others

State and Federal Stimulus

- ▶ **Federal** ARRA funding – Contact the Dept. of Commerce
- ▶ www.commerce.wa.gov
- ▶ Recovery

GA's Energy Savings Performance Contracting Making it Happen

- ▶ GA's Energy Program is working with:
- ▶ Over 30 school districts
- ▶ Several local governments
- ▶ A few state agencies

Energy Savings Performance Contracting (ESPC)

- ▶ Background
- ▶ Experience
- ▶ Procedure

ESPC Background

- ▶ Legislative Authority
- ▶ Definition
- ▶ Benefits
- ▶ Qualifying Projects
- ▶ Financing

Legislative Authority

RCW 39.35A.050

- ▶ The state department of general administration shall maintain a registry of energy service contractors and provide assistance in identifying available performance-based contracting services

Legislative Authority

RCW 39.35C.020

- ▶ The department shall assist state agencies and school districts in identifying, evaluating, and implementing cost-effective conservation projects at their facilities

ESPC Definition

- ▶ A method of identifying, constructing and financing energy and utility conservation projects
- ▶ Uses energy and utility dollars saved to pay for the project costs
- ▶ Eliminates most of the risks associated with the design, bid, build (DBB) process

ESPC Benefits

- ▶ Low bid acceptance not required
- ▶ Owner involved with contractor selection
- ▶ Owner involved with equipment selection
- ▶ GA has over 20 years of successful performance contracting experience
- ▶ **GUARANTEED:**
 - ▶ Maximum project cost
 - ▶ Energy savings
 - ▶ Equipment performance

ESPC vs. low bid method

	Conventional DBB Method	ESPC Method	Benefits of ESPC
A&E Selection	Required competitive	Competition Completed by State, Firms pre-qualified	Save time and cost
Contracts	Contracts have to define methods and materials in detail	Contracts define Performance and Guarantees	Save time and cost No surprises
Pricing	Not “open book” – Low Bid + Change Orders	All pricing open book Fees pre-negotiated and guaranteed	Know what you are paying for
Financing	Capital or Operating Budgets – Up Front	State Trees, Bonds, ESCO or 3 rd party, Paid out of savings	No legal fees Power of state buying Low interest rates

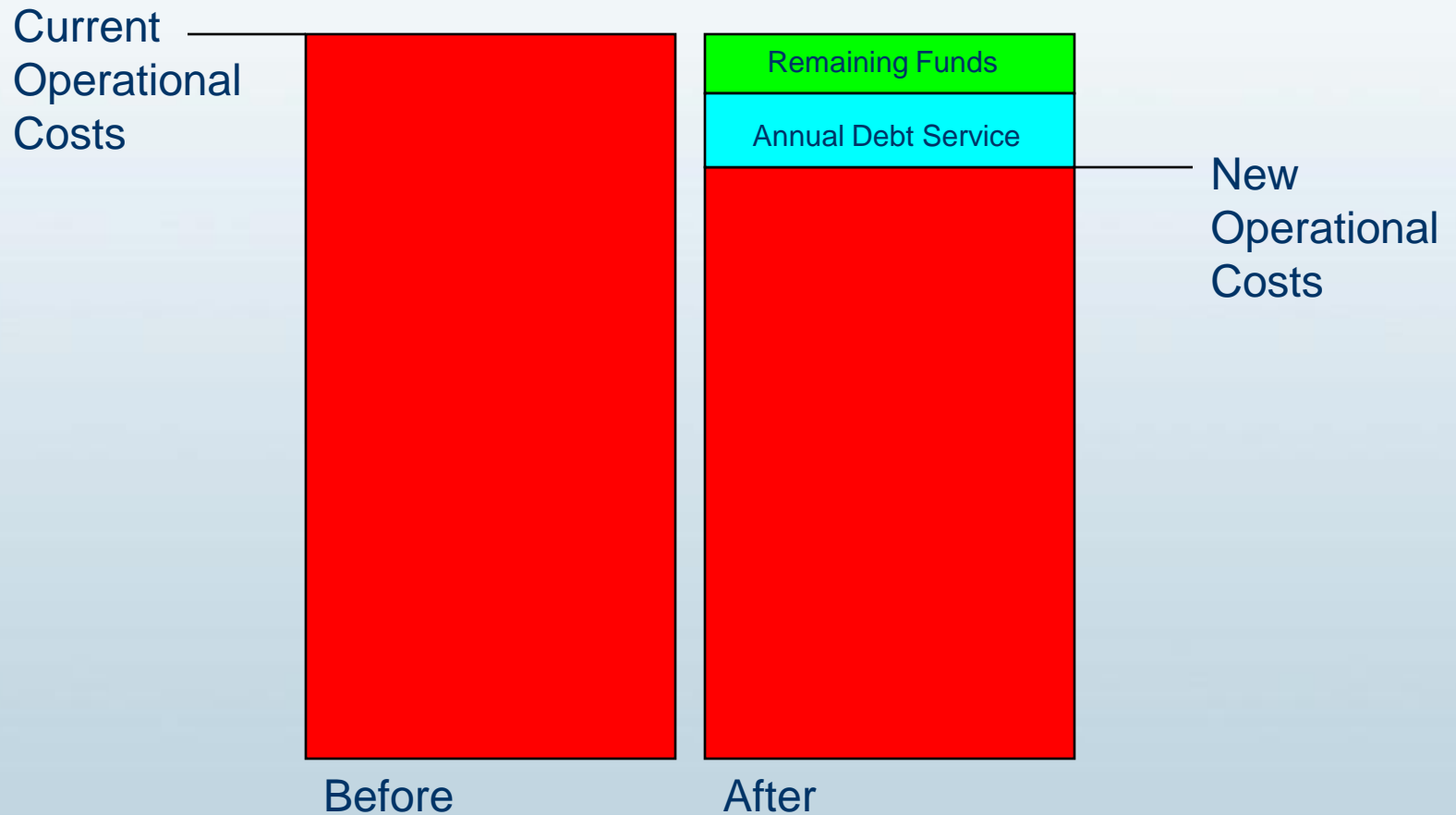
Qualifying Projects

Energy, Water and Sewer saving projects such as:

- ▶ Lighting projects – lamps, ballasts & fixtures
- ▶ HVAC modifications
- ▶ Steam & condensate piping systems
- ▶ Boiler & chiller systems
- ▶ Energy management control systems
- ▶ Buildings and grounds water conservation
- ▶ Wastewater treatment plant energy retrofit
- ▶ LED traffic lights

Financing

Budget Neutral Approach



Financing Options

- ▶ **Energy Service Company (ESCO) Financing**
- ▶ **State Financing**
 - ▶ State Treasurer's LOCAL Program
 - ▶ 4% - 5% interest rate
 - ▶ 5 to 10 year loan
- ▶ **Other Financing**

GA Experience

- ▶ **Energy Conservation in Public Facilities (since 1991):**
 - ▶ \$200 million in total projects
 - ▶ \$25,000,000 in grant funds brought to the projects
 - ▶ \$12 million in annual energy cost savings

Case Study 1

- ▶ **City of Lynnwood**
 - ▶ **Project Scope:**
 - ▶ Traffic signal retrofits
 - ▶ **Benefits:**
 - ▶ Energy and labor savings
 - ▶ **Cost:**
 - ▶ \$445,500
 - ▶ LOCAL loan \$376,500
 - ▶ Grant \$68,900
 - ▶ **Savings:**
 - ▶ \$32,900 annual energy savings

Case Study 2

Port of Sunnyside

Project Scope:

- ▶ Retrofit wastewater treatment plant with solar powered and grid connected mixers, VFD drives on irrigation system

Benefits:

- ▶ Energy and system process improvements

Cost: \$596,581

- ▶ Capital funds \$415,331
- ▶ BPA grant \$68,900

Savings:

- ▶ \$57,268 annual electrical and demand savings

Case Study 3

▶ Kitsap County

▶ Project Scope:

- ▶ Replaced aging boilers with high efficiency units
- ▶ Replaced air handling units
- ▶ Improved HVAC controls in all facilities
- ▶ Retrofit lighting

▶ Benefits:

- ▶ Improved comfort
- ▶ Better HVAC control
- ▶ Energy and maintenance savings
- ▶ Reduced carbon footprint

Case Study 3 (continued)

▶ Kitsap County

▶ Cost:

- ▶ \$1,231,744

- ▶ State Treasurer loan \$1,181,744

- ▶ Puget Sound Energy grant \$50,000

▶ Savings:

- ▶ \$118,083 annual energy savings

- ▶ \$10,966 annual maintenance savings

- ▶ CO2 reduction of 3,378,480 pounds per year

Experience

▶ Cities, Counties and Ports

- ▶ City of Bellingham
- ▶ City of Bellevue
- ▶ Benton County
- ▶ City of Bothell
- ▶ Clark County
- ▶ Cowlitz County
- ▶ City of Fife
- ▶ City of Kent
- ▶ King County
- ▶ City of Kirkland
- ▶ Kitsap County
- ▶ City of Lynnwood
- ▶ City of Mountlake Terrace
- ▶ City of Newport
- ▶ Pend Oreille County
- ▶ City of Port Orchard
- ▶ City of Prosser
- ▶ City of Pullman
- ▶ Port of Seattle
- ▶ Port of Sunnyside
- ▶ City of Tacoma (Dome)
- ▶ Walla Walla County
- ▶ Whatcom County

Sequence of an ESPC Project

- 1. Project initiated by an Interagency Agreement**
- 2. ESCO selection**
- 3. Preliminary audit**
- 4. Investment grade audit**
- 5. Design and construction**
- 6. Measurement and verification**

Thank You



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STATE OF WASHINGTON